AMSAT News Service Weekly Bulletins
Issue: ANS-199
Date: 2016-07-17
Sources: amsat-ans-2016-ans-199-weekly-hyperkitty-262e8d44ce.txt

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AMSAT NEWS SERVICE
ANS-199

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-199.01
ANS-199 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 199.01
>From AMSAT HQ KENSINGTON, MD.
July 17, 2016
To All RADIO AMATEURS
BID: $ANS-199.01

ARISS Well Represented at ISS R&D Conference

ARISS was well represented at the ISS R&D Conference, held this past week in San Diego.

An ARISS Team led by ARISS International Chairman and AMSAT VP for Human Spaceflight Frank H. Bauer KA3HDO, had the opportunity to meet with others that have a vested interest in or support to the ISS-including those responsible for ISS payloads, scientists/researchers, contractors, aerospace developers and NASA employees.

The team including Bauer, Rosalie White K1STO, Kerry Banke N6IZW, Tim Bosma W6MU, and Dave Taylor W8AAS, staffed a display and helped with an ARISS contact during the conference.

The ARISS contact was conducted among a consortium of schools attending the ISS R&D conference as part of STEM day and telebridged

via W6SRJ. Descriptions of the schools participating in the contact are shown below:

Lake Elementary School, Oceanside, CA

Lake Elementary School opened in 1989 in southeastern Oceanside. A top priority continues to be the use of technology by students and staff to prepare children for 21st Century College and Career readiness.

Community Montessori Charter School, Escondido , CA

CMCS currently serves approximately 375 students in grades K-8. Students attend one of five resource centers located throughout San Diego county, and are on a Montessori home study program.

Vista Magnet Middle School, Vista, CA

Students will be literate, reflective and critical thinkers in all areas of interaction who transfer knowledge and embrace diversity within a global society.

Monte Vista Elementary School, Vista, CA

Our vision at Monte Vista Elementary is to ignite a love of learning and a sense of curiosity in all students. We will promote academic achievement through high expectations and develop problem solvers who are technologically proficient.

Lilac School, Valley Center, CA

The Lilac Learning Community shares a commitment to exploring, developing and differentiating deliberate, effective strategies and practices for learning in a dynamic environment of collaboration, inquiry and diversity.

STAR Prep Academy, Los Angeles, CA

The STAR PREP ACADEMY is an extraordinary private middle & high school for students who seek an individualized approach to learning, based on their desired areas of specialization.

Westminster Christian School, Miami, FL

Founded in 1961, Westminster is an independent, college-preparatory, coeducational Christian school serving 1,241 students from preschool through 12th grade.

There were 210 in attendance near CASIS Space Station Explorers booth.
Astronauts Carl Walz and Josh Cassada attended and talked with audience pre and post contact.
All 16 students asked and had their questions answered with a total of 21 questions being answered.
The event was covered by San Diego TV station Channel 8 (CBS).

[ANS thanks ARISS for the above information]

LUSEX Transponder Test Successful

On the night of Wednesday 13 July, the scheduler loaded into the

computers of fresh, the satellite ñusat1 that houses the lusex, active the experiment of Amsat-Lu. The breath of the transponder could be received between 145.950 and 145.955 with more intensity and heard the call of lu1esy and the issuance of lu9do CW. These first tests will continue during the next weekend conducted by lu1cgb, to try to improve the living conditions of the operational lusex.

Those who live in the ignition of the lussat-1 we could feel the same way this "birth" of lusex and feel the same way. Friends, it's an honor to join the group of lusex development, which is proposed and I reach the goal and congratulations... We by the commitment to achieve it.

In a follow-up it was reported "...07/14 LUSEX transponder was activated. We heard noise from space @145.950 and then a call from LU1ESY.

Transponder is under test, enabled occasionally.

We are very excited. More news soon.

http://lusex.org.ar
https://facebook.com/Amsat.LU
http://amsat.org.ar

[ANS thanks Nacho LU1ESY for the above information]

Home of Australia's First Satellite is at it Again

The Melbourne University is now designing a CubeSat, and hopefully will have it ready for launch in 2018.

The same university built Australia's first Amateur Radio satellite Australis-OSCAR-5, that was launched on 23 January 23, 1970. It was then the first Amateur Radio satellite built outside of the United States.

Australis-OSCAR-5 was a beacon on 29.450 MHz and 144.050 MHz with telemetry starting with HI sent in Morse code, with sensors giving the battery voltage, temperature and the satellite's orientation.

Passive magnetic attitude stabilisation was achieved by two bar magnets to align with the Earth's magnetic field to provide a favourable antenna footprint.

Built on a small budget, it had bed springs for deploying the bird, and a cut down metallic measuring tape for antennas that extended from the sides of the satellite.

At least 200 observers heard it reporting from 27 countries up to 46 days before going silent when its batteries failed.

Today, Melbourne University Engineering Department students are working on the CubeSat project and restoring the Melbourne University old dish tracking antenna getting it ready for launch day.

Despite its small size the satellite's state-of-the-art communications system can send more data than other satellites, because of a world-first antenna that uses a special acid for inflation in space.

The new CubeSat could potentially find applications in agriculture, weather monitoring or even as a telescope in space.

[ANS thank Jim Linton, VK3PC and the VK1WIA News for the above information]

Cubesat Launch opportunity for December | are you ready to go?

In an email to the Cubesat,org mailing list, Abe Bonnema Marketing Director, ISIS - Innovative Solutions In Space wrote,

"Dear CubeSat (and nanosat) developers,

"We normally present launch opportunities well in advance and primarily through our website, at conferences and in direct communication with you, yet given the very short time available, we opted for using the great medium of the CubeSat mailing list to make you aware of a very interesting, short-term launch opportunity;

Launch Vehicle: Indian PSLV
Launch Period: Dec 2016 - Feb 2017
Orbit: 580 km SSO
Launch Interface: ISISpace QuadPack or DuoPack family deployers (or ISIPOD on request)
(www.isispace.nl/cubesats/#supported-sizes)

"We have a few 1U/2U/3U or 6U slots available still.

"We'll have to close the manifest and configuration in the coming weeks. So if you're still looking for a launch from end of this year, and the abovementioned orbit is suitable, please contact us through launches(a)isispace.nl. We'll be at the CubeSat Workshop and SmallSat as well for possible final additions to the manifest.

Looking forward to placing your satellites on this (or another, future) launch."

[ANS thanks Abe Bonnema for the above information]

LilacSat-2 Linear Transponder Tested

On July 10, 2016 the SSB/CW linear transponder on the student built satellite LilacSat-2 was successfully tested

LilacSat-2, call sign BJ1SI, was built by students at the Harbin Institute of Technology and launched on September 19, 2015.

The 40 kHz wide SSB/CW transponder is Non-Inverting which means the Doppler shift of a signal going through the transponder will be twice that seen on other Low Earth Orbit inverting linear transponder satellites.

Clayton Coleman W5PFG reported that he and Glenn Miller AA5PK had a contact through the transponder, a recording can be heard at https://soundcloud.com/w5pfg/lilacsat-2-2016-07-11-1315z-ssb-transponder

The transponder frequencies are:
• 144.3425-144.3825 MHz Uplink
• 437.180-437.220 MHz Downlink
It is not yet known when the transponder will be activated again.

LilacSat-2
https://amsat-uk.org/satellites/communications/lilacsat-2/

[ANS thanks Southgate ARN for the above information]

AMSAT-NA Board of Directors Ballots in the Mail

Ballots have been mailed to AMSAT-NA members in good standing, and must be returned to the AMSAT-NA office by September 15, 2016 in order to be counted. Those sent outside North America were sent by air mail. If you have not received your ballot package in a reasonable time for your QTH, please contact the AMSAT-NA office. Your completed ballot should be sent as promptly as possible, and those from outside North American preferably by air mail or other expedited means.

This year there are five candidates:

Tom Clark, K3IO
Clayton Coleman, W5PFG
Mark Hammond, N8MH
Bruce Paige, KK5DO
Paul Stoetzer, N8HM

The three candidates receiving the highest number of votes will be seated as voting Board Members with two year terms. The two candidates receiving the next highest number of votes will be non-voting Alternate Board Members with terms of one year. Please vote for no more than three candidates.

Please take the time to review the candidate statements that accompany the ballot and determine who you wish to see on the Board. Election of Board members is both an obligation as well as an opportunity by our membership to help shape the future direction of AMSAT-NA.

[ANS thanks the AMSAT Office for the above information]

Satellite Activation of NPOTA Blue Ridge Pkwy PK01

John Brier's KG4AKV first National Parks on The Air activation from Blue Ridge Parkway PK01 EM85 at Craggy Gardens in North Carolina was a big success and very fun. On the July 16th 1546 UTC SO-50 pass he made fourteen contacts with the following stations, in order of contact:

K8YSE, N8HM, K4FEG, KM4ULB, W2JV, KI4RO, WI9I, WA5KBH, W4DTA, N4UFO, AA5PK, WU2M, K5ND, W1PA.

John thanks all the above stations. To those he couldn't get back to, like NP4JV, he suggests "we'll have to do it next time." John

stated he really enjoyed the spot he found, it had a very wide open view to the west and was mostly clear in the other directions except for some small brush in the immediate vicinity. It was also out of the way from most of the park attendees, so he didn't have to annoy anyone expecting a tranquil nature hike.

After the pass he wasn't sure he made the ten contacts he needed to get credit to be an activator, so he made several more contacts on 146.520 simplex, talking to stations in South Carolina, Charlotte, Hickory, Hendersonville, and a few more nearby towns.

He was also able to connect with one of the Golden Packet [1] stations in Roan Mountain and communicated with him over the UHF coordination frequency. He helped John configure his Kenwood TH-D72a to communicate on their APRS network and they shared several packets. John wasn't digipeated along the whole length of the Appalachian Trail, nor did he stick around for the golden packet attempt, but he did communicate directly with one of the stations using the official frequency, and states "that was very cool." John hopes to take part more seriously next year. John further thanks Bob, WB4APR, for responding to his NPOTA activation announcement email to let him know about the event.

A picture of the video of the beautiful view where he recorded the SO-50 pass is on his Twitter profile.
He plans to make a video of the pass for his "Space Comms" YouTube channel.
New videos are released there every Wednesday. This coming Wednesday, July 20th, won't be a video of this NPOTA activation as he has already started work on an ISS SSTV video, but look for the NPOTA video in two weeks.

http://aprs.org/at-golden-packet.html
https://twitter.com/johnbrier/status/754349709104480256
https://www.youtube.com/c/Spacecomms1

[ANS thanks John KG4AKV for the above information]

ARISS News

+ A Successful contact was made between Frontiers of Flight Museum's "Moon Day 2016", Dallas TX USA and Astronaut Jeff Williams KD5TVQ using Callsign NA1SS. The contact began Sat 2016-07-16 15:54:09 UTC and lasted about nine and a half minutes. Contact was telebridge via W6SRJ. ARISS Mentor was Keith W5IU.

+ A Successful contact was made ISS R&D Conference, San Diego, CA, USA and Astronaut Jeff Williams KD5TVQ using Callsign NA1SS.
The contact began Thu 2016-07-14 16:03:33 UTC and lasted about nine and a half minutes. Contact was telebridge via W6SRJ.
ARISS Mentor was Frank KA3HDO.

Upcoming ARISS Contact Schedule

Quick list of scheduled contacts and events:

YOTA Camp 2016 IARU-R1, Salzburg, Austria, telebridge via VK4KHZ
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Jeff Williams KD5TVQ

Contact is a go for:

United Space School hosted by the Foundation for International Space Education (FISE), Seabrook TX, telebridge via W6SRJ
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Jeff Williams KD5TVQ
Contact is a go for: Tue 2016-07-19 14:52:20 UTC

Ufa, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled astronaut is Oleg Skripochka RN3FU
Contact is a go for Thu 2016-07-23 18:50 UTC

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

[ANS thanks ARISS, Charlie AJ9N information]

Satellite Shorts From All Over

+ The world's largest radio telescope has just been completed

  China's 30-soccer-field-wide radio telescope will start the hunt for extraterrestrials.
  For the full story visit http://tinyurl.com/ANS199-RadioTelescope

  [ANS thanks Astronomy Magazine for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, AA8EM (former KC8YLD)
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